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# CANADIAN BOUNDARIES.

COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,

*January 21, 1908.*

The subcommittee met at 1.30 p. m., Hon. R. G. Cousins (chairman) presiding.

## DIPLOMATIC AND CONSULAR APPROPRIATION BILL.

### STATEMENT OF OTTO H. TITTMANN.

The CHAIRMAN. There was created in 1903, as I recall, by virtue of the treaty with Great Britain, a tribunal to determine, if possible, the disputed boundary line between Alaska and Canada. We have been appropriating ever since certain sums of money to carry out their recommendations, or findings.

Mr. TITTMANN. I think \$240,000, all told.

The CHAIRMAN. In 1905 we expended \$44,918; in 1906, \$38,375; and last year, \$71,483. The committee would like to know, in as condensed a form as you are able to state, what has been accomplished and how much yet remains to be done.

Mr. TITTMANN. The tribunal to which you refer indicated the mountains which in their judgment corresponded to the treaty. That is only a very general definition. The Commissioners thought it most important first to mark the boundary crossing in the rivers, because those give access to the interior, and that is where questions might arise. Certain regions of the boundary can not be monumented at all, because of the perpetual ice and snow which cover the summits, but the points—that is, the mountains themselves—have been carefully determined, trigonometrically, so that they now take the place of artificial monuments and answer the purpose perfectly. We have monumented boundary crossings of the Chilkoot River and all of its affluents, and the White Pass, and the streams flowing into the Skagway River. We have determined the mountain peaks, trigonometrically, extending from the White Pass down Taku River, and have marked the crossing of the Taku River and the crossing of the Whiting River. There is a stretch of country which in the finding of the tribunal is designated as the region between points P and T, which has to be surveyed before the Commissioners can agree upon the particular mountain peaks.

The CHAIRMAN. What region would be indicated by points P and T as to the distance or any other way you can describe it? What distance would be covered?

Mr. TITTMANN. It is a stretch of boundary extending from a point 12 miles north of the Taku River in a southeasterly direction for 120

miles: of this we have delimited about 50 miles, leaving 70 to be surveyed. Then we have monumented the crossing of the Stikine River, the crossing of the Unuk River, and have established monuments at the head of the Portland Canal. We have also determined the boundary peaks in the St. Elias Mountain Range to the first peaks westward of the Alsek River.

The work that remains to be done, then, between the one hundred and forty-first meridian and the Portland Canal is the identification and determination of certain peaks in the vicinity of Mount St. Elias, the crossing of the Alsek, the determination and fixing of peaks between points P and T, which I have referred to, the crossing of the headwaters of the Iskoot River, between the Stikine and the Unuk, the crossing of the Chickamin, and the Le Duc River, and finally it is probable that the Commissioners will decide that monuments will have to be placed at certain points on the Portland Canal, in order to refer turning points in the water boundary to the permanent monuments on the shore.

I think, Mr. Chairman, that we will probably complete our work in three seasons in southeastern Alaska. The seasons are very short, and the output in any one season may happen to be small, not due to the lack of energy or enterprise on the part of the men, but due to circumstances over which they have no control.

The CHAIRMAN. What distance will eventually be covered in the entire boundary line between Alaska and Canada?

Mr. TITTMANN. Twelve hundred miles.

The CHAIRMAN. What portion has already been completed?

Mr. TITTMANN. We have, up to last summer, been working entirely on the southeastern portion. The treaty in regard to the one hundred and forty-first meridian went into effect year before last, so that we were working in southeastern Alaska all the time. We have just begun on the one hundred and forty-first meridian. We have had one season on that. The total distance is 1,200 miles, and in three more seasons we will complete the 600 miles of southeastern Alaska, and the 600 miles on the one hundred and forty-first meridian I am unable to say about, because we have only had one year's experience, and it is a very, very difficult country.

The CHAIRMAN. What character of marks are you making?

Mr. TITTMANN. In southeastern Alaska, and we shall probably follow the same scheme on the one hundred and forty-first meridian, we have been putting in aluminum bronze monuments, small ones, set in rock or cement, and about 30 inches high, except that at the White Pass and at certain other important points we have put obelisks, also made of aluminum bronze, about 5 feet high.

The CHAIRMAN. Will they be of a permanent nature?

Mr. TITTMANN. They will be permanent and will last forever. That is what we are trying to do. We are basing our work upon the experience of the past and are trying to do it well.

The CHAIRMAN. Certain portions of the boundary line you have indicated will be marked on the record by certain mountain peaks and those records will last as long as the mountain peaks themselves?

Mr. TITTMANN. Absolutely; yes, sir.

The CHAIRMAN. Is the Canadian government expending a like amount of money for this work?

Mr. TITTMANN. About the same amount.

The CHAIRMAN. Of course the officers having this in charge are not receiving any extra compensation for it?

Mr. TITTMANN. No, sir; they are not receiving any extra compensation, and there is no new machinery required to administer work.

The CHAIRMAN. You get none?

Mr. TITTMANN. No, sir; I get none, nor the disbursing agent, and there is no new machinery. That is why the work has been done so cheaply.

The CHAIRMAN. All these sums that were enumerated in my opening question, as I understand, go to the labor that is necessary to carry on the work?

Mr. TITTMANN. Absolutely.

Mr. LANDIS. How much force have you?

Mr. TITTMANN. The force varies. I have been employing a number of men outside of this survey, because we have not men enough, during the season, and laying them off when the season is over. All of our best men I have kept right through the season because I needed them here, I needed them to finish up their work, but the other men I discharge just as soon as the work is over.

And that brings me to a matter which I desire to put before your committee. I wrote a letter yesterday to the Secretary of State, asking that my estimate be amended, and that the appropriation be made \$75,000, and made immediately available. My reason for that is that I shall need about \$50,000 to start the parties. We have to provide a long time in advance. I started in with the estimates a few days ago, as soon as I had an agreement with the British commissioner that he would send certain parties, and I agreed to send certain parties, then we made our estimates, and I find that the mere cost of putting my parties in the field and providing them with supplies will require about \$50,000. I have about \$30,000 left to do this with, and I therefore ask that the appropriation be made \$75,000 and immediately available. I suppose the letter has not reached you, because I was not in shape to send it to the Secretary until yesterday morning, but I thought it would reach you before you called me up. May I present this copy of it to you?

The CHAIRMAN. You say you have \$20,000 left from last year's appropriation?

Mr. TITTMANN. For this year, but you see my year does not expire until June.

The CHAIRMAN. Then you do not mean to say you will have anything left at the termination of the time of the appropriation?

Mr. TITTMANN. No, no; I mean I would be \$20,000 short unless you make this appropriation immediately available. In other words, I would not send the parties, but I need \$50,000, and it is very close shaving, gentlemen.

Mr. LANDIS. What time do you expect to start your men up there?

Mr. TITTMANN. Some of the men to get in on the one hundred and forty-first meridian will start in over the ice. They go over the White Pass and go down in sleds. Those are the people who trace the line. What I want to do now is to have them haul provisions from Fortymile Creek to the one hundred and forty-first meridian over the ice and snow, because that is the cheapest way of getting them there.

The CHAIRMAN. How many men will go up there?

Mr. TITTMANN. I can not tell you exactly, but I suppose we will have something like 35 men in there.

The CHAIRMAN. Have you employed at other times previous to this as many as 35 men?

Mr. TITTMANN. Oh, yes.

The CHAIRMAN. The expenditure of these sums is always accounted for by vouchers?

Mr. TITTMANN. Oh, yes; and in the strictest way.

#### BOUNDARY LINE, THE UNITED STATES AND CANADA.

The CHAIRMAN. It appears that we have been at the work of marking the United States and Canadian boundary for a number of years. I note that we expended \$30,500 in 1903, \$65,388 in 1904, \$61,201 in 1905, \$3,719 in 1906, and \$21,930 in 1907. I would like to know how much of the distance has been covered on that boundary and what remains to be covered.

Mr. TITTMANN. The appropriation to which you refer related mostly, possibly all, to the region west of the summit of the Rocky Mountains, between the summit of the Rocky Mountains and the Pacific coast, and the appropriation was so worded that it would be confined to that—not the present estimates, but the former appropriation.

The United States really completed its part of the work, excepting the final inspection, about two years ago. The Canadians were a little behind us. They, I think, finished last summer, and nothing remains to be done on that stretch of country from the summit of the Rocky Mountains to the Pacific Ocean except an inspection of a part of the line and acceptance by the commissioners, and the making of the maps—not the surveying, but the engraving of the maps—and the report. What we did there was to cut a line through the woods for 400 miles. We monumented the whole line with aluminum bronze monuments, set in deep bases of cement, very solidly set, and carried on a triangulation so as to relate it properly to the surrounding country which we have mapped. I think you will find what we spent on that was about one-fourth of what the original commission spent. I am speaking now only for the United States. In this case, as in the Alaska boundary case, there was no administrative machinery to be created. We simply took it up as a surveying task; there was no compensation for any of the commissioners. A commissioner when he travels gets his actual traveling expenses and that is all. So that it has been very economically done, and very quickly done, and I think permanently done.

The CHAIRMAN. Up to the base of the Rocky Mountains?

Mr. TITTMANN. From the summit of the Rocky Mountains to the Pacific coast.

Mr. LANDIS. That is about halfway?

Mr. TITTMANN. No; it is not even halfway. Then what remains is about 1,220 miles of re-marking, from the summit of the Rocky Mountains to Lake Superior. Then, skipping the water boundary through the Great Lakes, which I suppose will have to be looked after in a certain way, that is more as a matter of convention than of monumenting, though monumenting will be required in the narrow passages, there remains practically the remonumenting of the



international boundary of Maine, a distance of about 600 miles. That is, you have about 1,800 miles in round numbers.

The CHAIRMAN. But you have already marked the northern boundary of Vermont and New York.

Mr. TITTMANN. Yes; I am taking those out. I say besides that.

The CHAIRMAN. In addition to that you will still have 1,800 miles?

Mr. TITTMANN. Yes, sir.

The CHAIRMAN. How long will that take?

Mr. TITTMANN. That depends on how large a force we are putting in.

The CHAIRMAN. The way you are moving and the way you have been moving for five years.

Mr. TITTMANN. Of course the United States does only about half of it. I was speaking of it as though we were doing all of it.

The CHAIRMAN. Do you overlook each other's work, or do you apportion it and then do your share?

Mr. TITTMANN. Each of us does our share, at least that is the way we did it in the Rocky Mountains. We divided it up into equal portions as near as might be, but each party has representatives with the other party.

The CHAIRMAN. And you would accept each other's findings and establishments?

Mr. TITTMANN. Yes, we accept them; but we really test them always.

The CHAIRMAN. You do not mean to say that you resurvey it?

Mr. TITTMANN. Oh, no.

The CHAIRMAN. Then you have about 1,800 miles remaining, and if you divide the work you would have 900 and they 900 to do?

Mr. TITTMANN. Yes, sir.

The CHAIRMAN. How long will it take if you use the same means and force that you have been using?

Mr. TITTMANN. I have figured a little on what I thought would be the cost of it, if that is what you would like to know.

The CHAIRMAN. We would like to know both about the cost and how long.

Mr. TITTMANN. In answer I submit this estimate of the cost to the United States, both as to the Alaska and the northern boundary.

*Northern boundary.*—Summit of the Rocky Mountains to the Lake of the Woods, four years, 865 miles, cost \$115,000; Lake of the Woods to Lake Superior, two years, 355 miles, cost \$37,000; Vermont boundary to Grand Manan Channel, 572 miles, cost \$100,000.

*Alaska boundary.*—One hundred and forty-first meridian, 9 years, 650 miles, cost \$406,000; southeast Alaska, three to four years, total distance, exclusive of Portland Canal water boundary, about 600 miles. About 190 miles remain to be done, at an estimated cost of \$60,000.

Mr. LANDIS. Could you work advantageously with a proportionately larger force if we will give you the money?

Mr. TITTMANN. No. I will tell you where I think the difficulty really comes in. I think we can put in a larger force than the Canadian commissioner. We have more trained men over here than they have there, and they can use only trained men.

Mr. LANDIS. You are simply matching up against his work?

Mr. TITTMANN. Yes; we let him match up against us as near as may be.

The CHAIRMAN. There has been inserted in the estimates an additional qualification, "including employment at the seat of Government of such surveyors, computers, and draftsmen as are necessary to reduce field notes." Haven't you been doing that right along?

Mr. TITTMANN. Yes; but we can only employ people that come have been in the field, and I do. That is perfectly proper. But now that these surveys are getting along it is necessary to bring up the office work. I have really had in mind more especially the computers and draftsmen. We are overloaded in the survey office, and need trained computers and draftsmen. I would like to have authority to do it. I would only employ them when I needed them.

The CHAIRMAN. But you have been employing here at the seat of Government the people——

Mr. TITTMANN. Yes; but we can only employ people that come from the field. What I mean is, if I have a piece of computing to do or a piece of drafting to do, which ought to employ all of the draftsman's time, or the computer's time, I would like to have an opportunity to do it.

The CHAIRMAN. Where are these field men while these additional employees would be at work?

Mr. TITTMANN. They might be in the office or they might be in the field. They are all occupied, but there is a great deal more to do than they can do. That is, the work is accumulating in my hands.

The CHAIRMAN. What is being done now in regard to these various surveys?

Mr. TITTMANN. In regard to Canada?

The CHAIRMAN. Yes.

Mr. TITTMANN. The only work to be done next season is to make a final inspection of the western part of the boundary west of the summit of the Rocky Mountains. Then we will have a party out at work on the Maine boundary, and those are the only parties that I can provide for at present.

The CHAIRMAN. What is being done at this moment by any of the force?

Mr. TITTMANN. There are no parties in the field now. Part of them are in San Francisco working up their field notes. Some of them are in Ithaca, one party is in Ottawa, and some of them are at the office here. That is the distribution. To explain: For instance, in Ithaca there is an instructor, Mr. Leland, who was formerly an assistant in the Coast Survey, whom I employ during the summer season because the college has allowed him to go away, and his monthly pay stops at the close of the season. The Alaska season is very short—he has done most excellent work in Alaska. And that is one reason why we have done the work so cheaply.

The CHAIRMAN. In other words, your force is not on a constant or continuing pay roll?

Mr. TITTMANN. No. Some of them are employed continuously, but not all of them.

The CHAIRMAN. How many men have you now on the pay roll engaged in this particular business of the boundary line between the United States and Canada?

Mr. TITTMANN. There are eleven men, technical men, and receive from \$125 to \$150 a month.

The CHAIRMAN. Are they under the civil service?

Mr. TITTMANN. Yes, nearly all of them. The civil service expects certain classes of men where the work is in Alaska or on the international boundary. That is, we are compelled to get them from the civil service whenever we can, and we do.

The CHAIRMAN. These eleven men you now have are on a permanent pay roll?

Mr. TITTMANN. Those men, I think, all are on the permanent pay roll.

The CHAIRMAN. That is to say, all that you now have in the employ working in this particular service are on the permanent pay roll?

Mr. TITTMANN. Yes; I pay them per annum salaries.

Mr. LANDIS. In this work are you subjected to many hardships?

Mr. TITTMANN. Most assuredly. In southern Alaska, especially, the work is in the snow and ice fields. The men have to cross glaciers. They drop in; they have to be roped in crossing those places, and I am glad to say that no fatalities have occurred, but the men time and time again have dropped into chasms and been pulled out. It is very difficult work.

Mr. LANDIS. And very hazardous?

Mr. TITTMANN. Very hazardous.

Mr. LANDIS. As to the torture that you are subjected to from mosquitoes?

Mr. TITTMANN. I can speak feelingly about that, sir, because in 1903 I was on the Stikine River myself, and was nearly driven frantic by them, because they are immeasurably numerous and persistent. You have no rest night or day. You of course protect yourself with mosquito netting and mosquito bars as best you can, but there are moments when you can not, as, for instance, when you get out at 5 o'clock in the morning to wash down, they will light on you, and before you can destroy them by rubbing them in the soap and water, they torture you. When you cover your face with mosquito netting and put your eyes to the instrument they will find the lid of the eye while you are looking into the instrument, and toward evening you will find your ears and eyelids covered with blood dots, and your wrists in the course of a few weeks become so sore you are kept continually on edge. It was torture. I don't like to speak of mosquitoes that way, but it is no exaggeration.

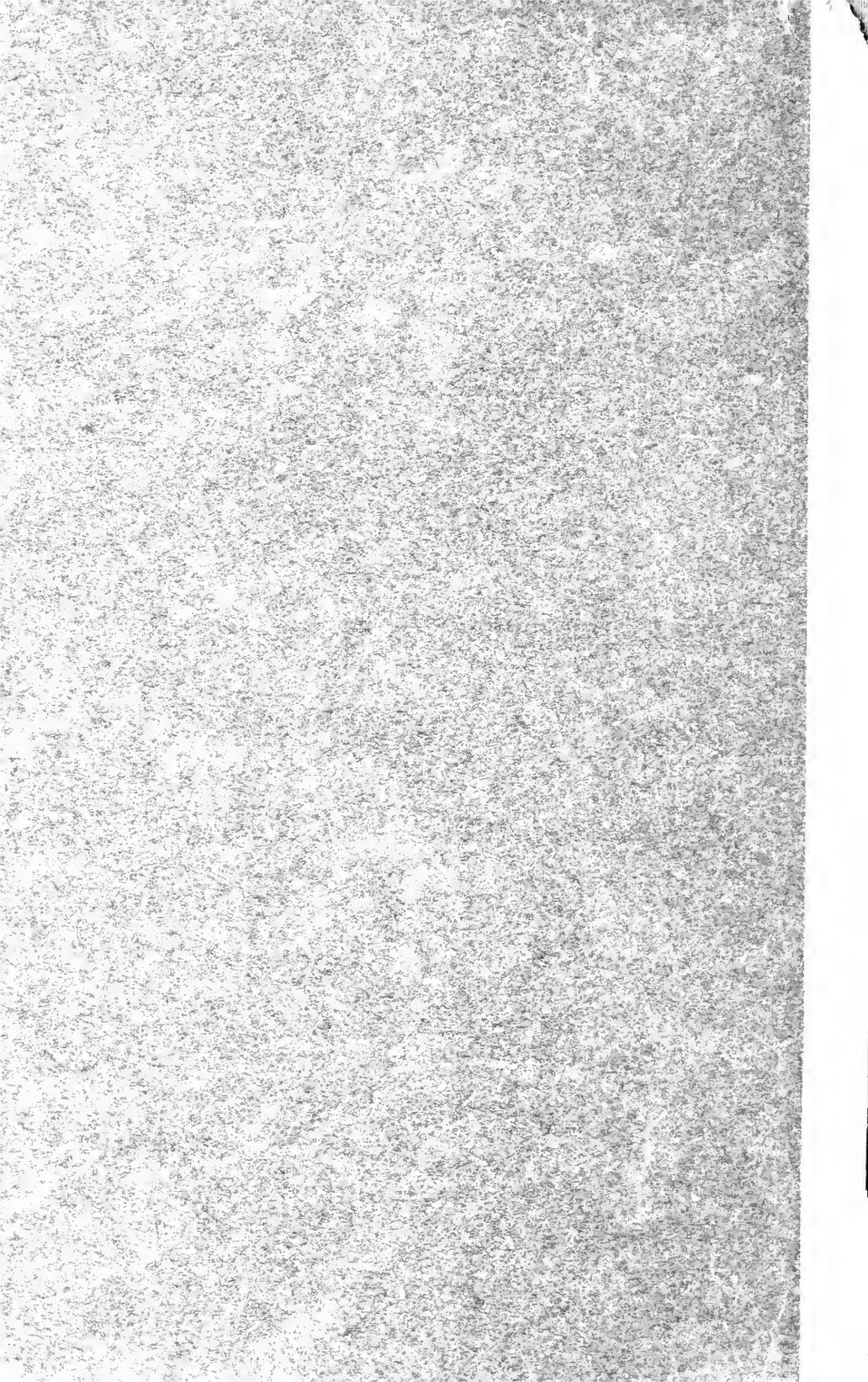
I will say more in regard to the difficulties and the expenses. The British commissioner asked for tenders for taking some provisions to the head of the White River, where we hoped to get last season. The only tender he got was one for 68 cents a pound freight. Now, think of buying a can of beans for 25 cents and paying 68 cents a pound freight on it to get it there. And I don't think that was an unreasonable price. But he did not accept the tender, but what he did do was to buy horses and take them in, and that is expensive, because you lose your horses. You can take them in, but you can not take them out.

The CHAIRMAN. Why can't you take them out?

Mr. TITTMANN. Because it would cost more than to buy new ones and take them in. And at the end of the season they are not fit, because you can not carry feed for them and they have to eat such grass as you get there, and at the end of the season's work the only thing you can do is to shoot them.



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